CHSI Stratification Process

JULY 2000

U.S. Department of Health and Human Services

HRSA

Health Resources and Services Administration

NACCHO ASTHO PHF

Providing information for improving community health

PEER COUNTIES

A distinctive aspect of the CHSI Project is that each county can be compared with its peers, those counties similar in population composition and selected demographics. Comparison of a county to its peers is thought to take into account some of the factors that make a difference in a community's health.

Strata, or peer groups, were developed with input from an advisory committee composed of Federal, State, and local public health professionals and members of academia. The project goal was to develop strata of 20-50 counties each, providing several peers for each county. The relatively large number in each stratum allows counties to choose a few peers that they believe to be most like them. The stratum size averages 35 and ranges from 14 to 58 counties. There are a total of 88 strata.

To define the strata, the following five factors were used:

(1) Frontier status (The National Committee on Rural Health recommended classifying areas as frontier if they had fewer than 7 persons per square mile. Source: Popper, F.J. (1986) The strange case of the contemporary American frontier. *Yale Review*: 76(1); 101-121);
(2) Population size, using the National Association of County and City Health Officials' population categories (less than 25,000; 25,000-49,999; 50,000-99,999; 100,000-249,999; 250,000-499,999; 500,000-999,999; 1,000,000 or more);
(3) Poverty quartiles (less than or equal to 10.55%; 10.56-14.15%; 14.16-19.25%; more than 19.26%), based on the percentage of individuals in the county living below the poverty level (e.g., in 1995 and for a family of four, the poverty level is $15,569);
(4) Median age categories, based on the percentage of children (percentage of persons age<18 less than 26.13% or greater than or equal to 26.13%) and elderly (percentage of persons age 65+ less than or equal to 14.70% or greater than 14.70%) in the county; and
(5) Population density, as measured by half deciles (e.g., CHSI stratum 45 ranges between 42-157 persons per square mile).

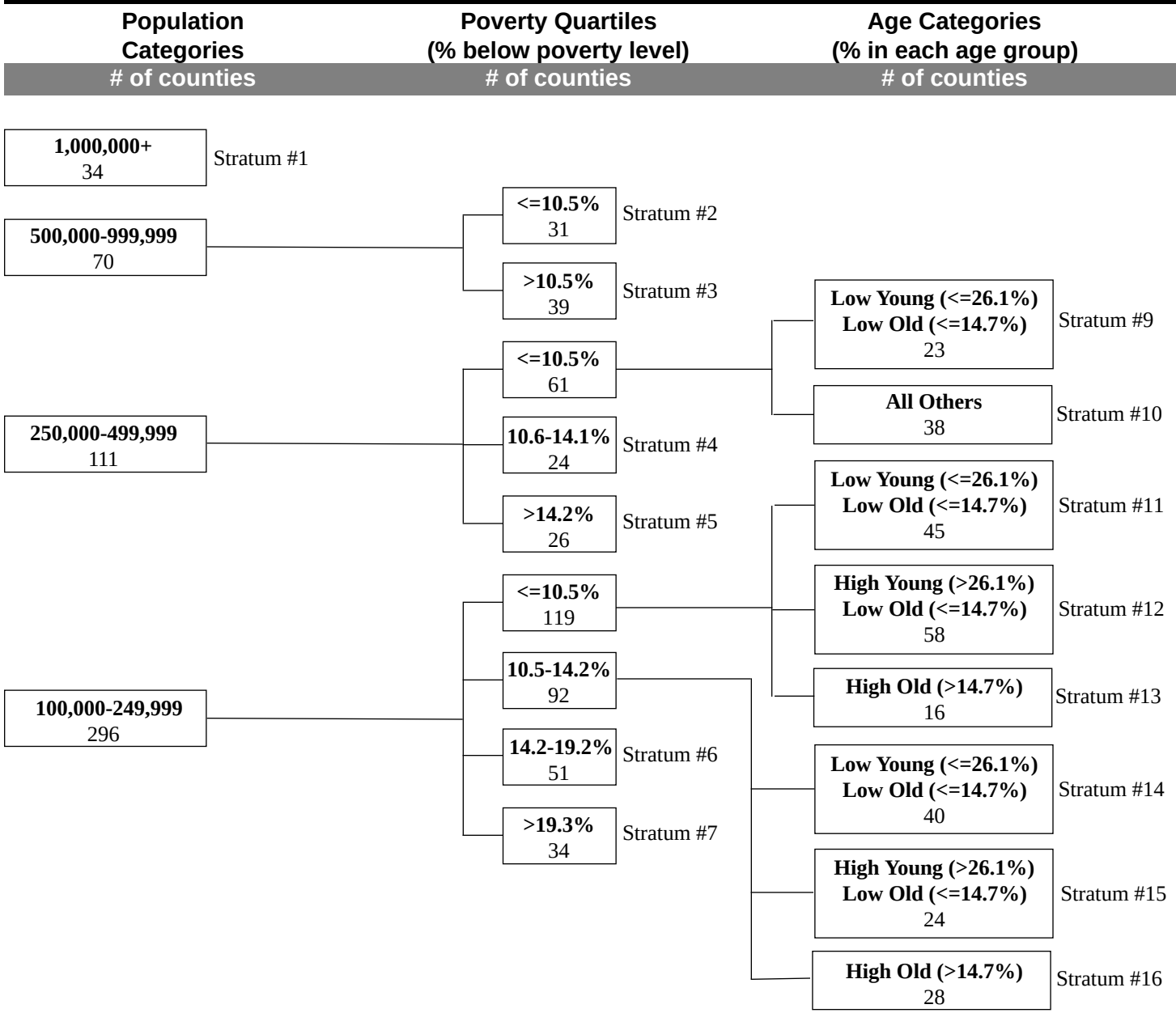
Using an ordered, staged approach, counties were first grouped according to frontier status. Population size was used next. Then, as the number of counties in each category allowed, further groupings were made based on the remaining variables until the optimum stratum size was reached. Therefore, while all peer groups were classified according to the first two variables, only some were defined by factors of poverty, age, and population density. A schematic of the stratification process follows.

Each of the 88 strata is uniquely defined by two or more of the factors. It is possible that counties that are similar in several factors may not be in the same stratum due to category divisions.

The Strata Listing contains stratum by number and provides the number of counties and the ranges for population size, density, and poverty level for each. This table provides the characteristics of all strata and allows identification of other strata having similar characteristics. We encourage you to view this table to examine additional strata generated using this method and to explore other counties' reports.

This is the project's initial attempt at forming peer groupings of counties. Please feel free to comment at the Web site listed above to any of the CHSI partners on this process and its utility. Future reports may use different methods and/or criteria for determining strata.

CHSI Stratification Algorithm
for Non-Frontier Counties (>=7 people per square mile) n=2677



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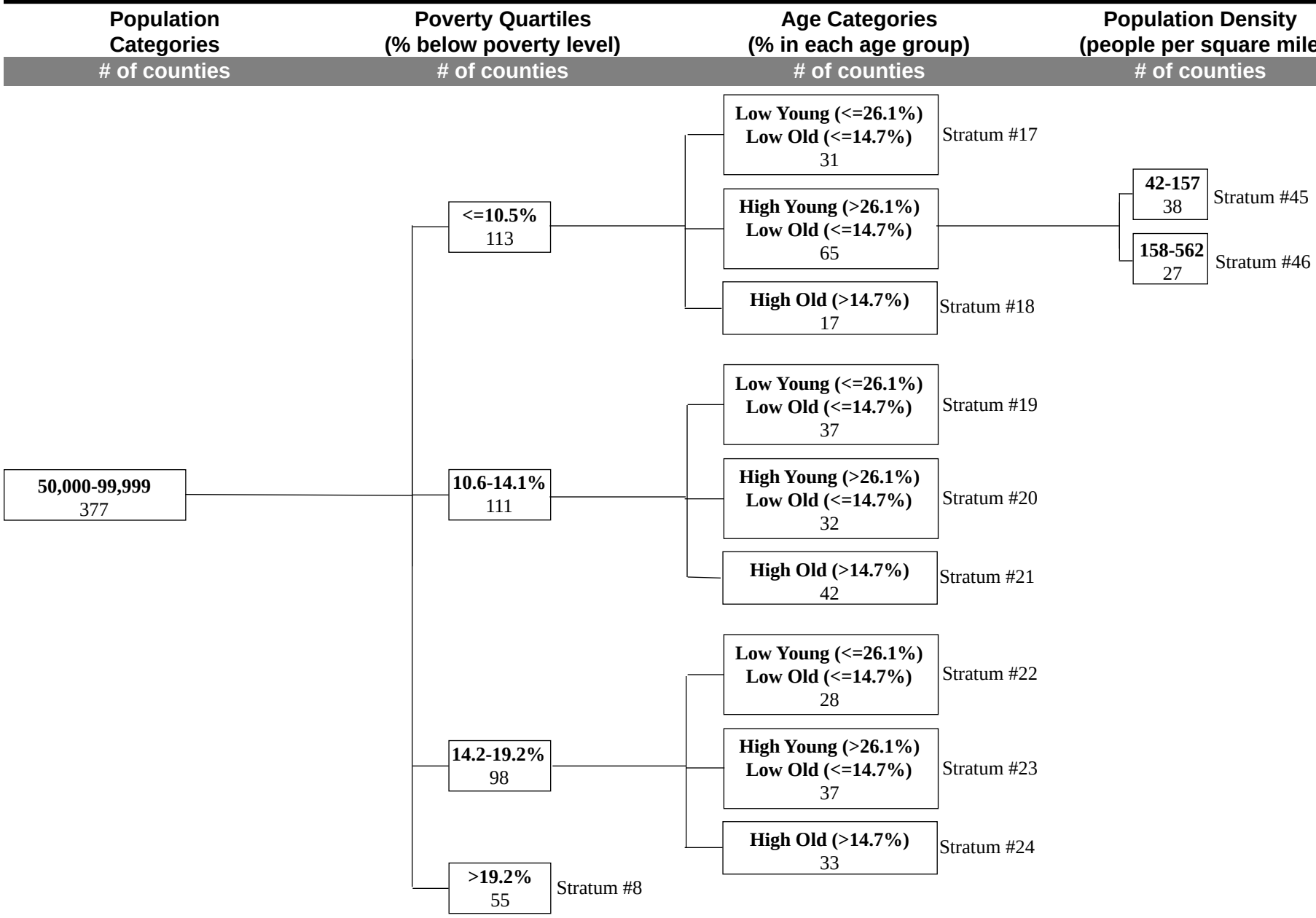
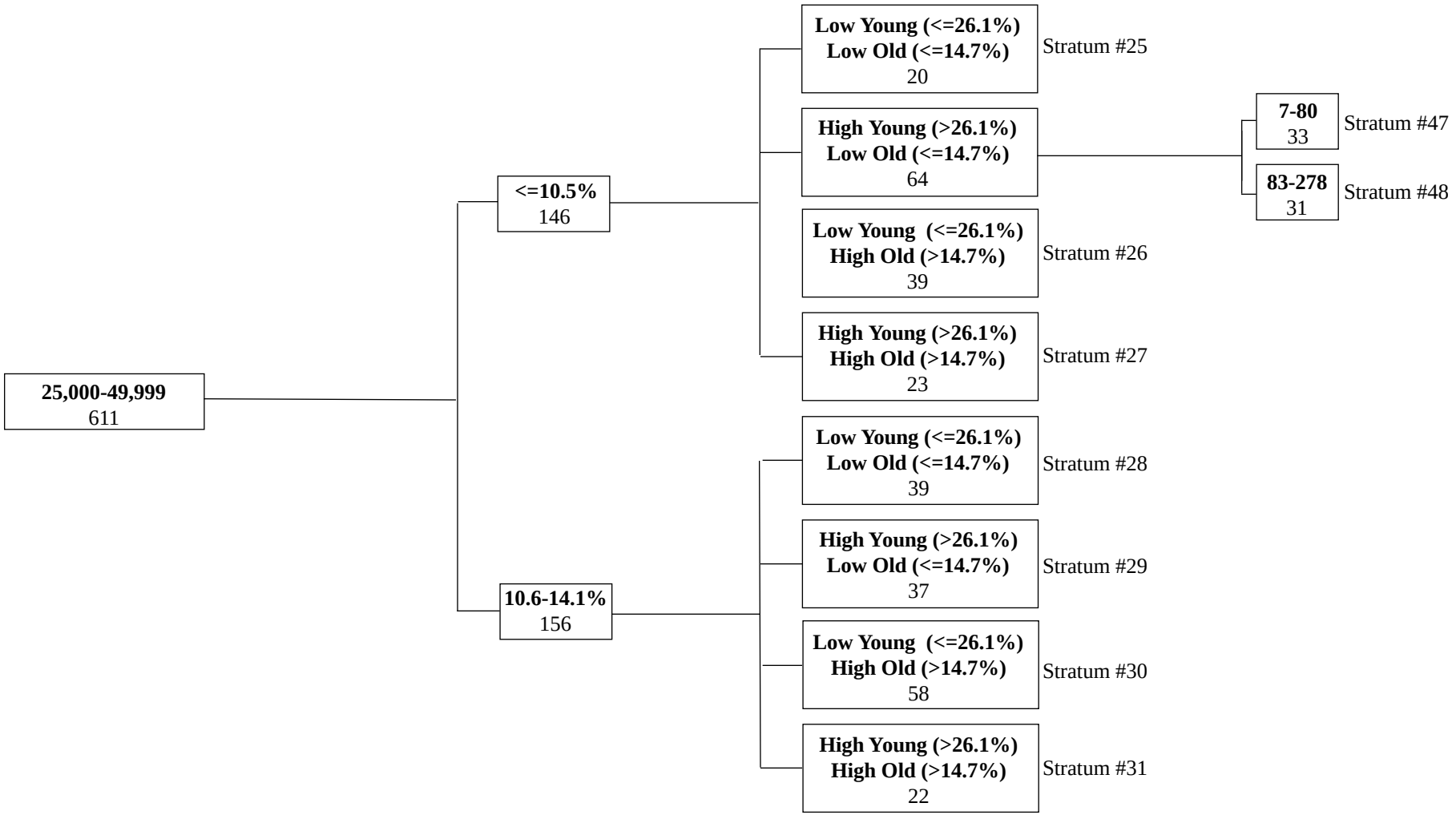


CHSI Stratification Algorithm
for Non-Frontier Counties (>=7 people per square mile) n=2677

Population Categories	Poverty Quartiles (% below poverty level)	Age Categories (% in each age group)	Population Density (people per square mile)
# of counties	# of counties	# of counties	# of counties



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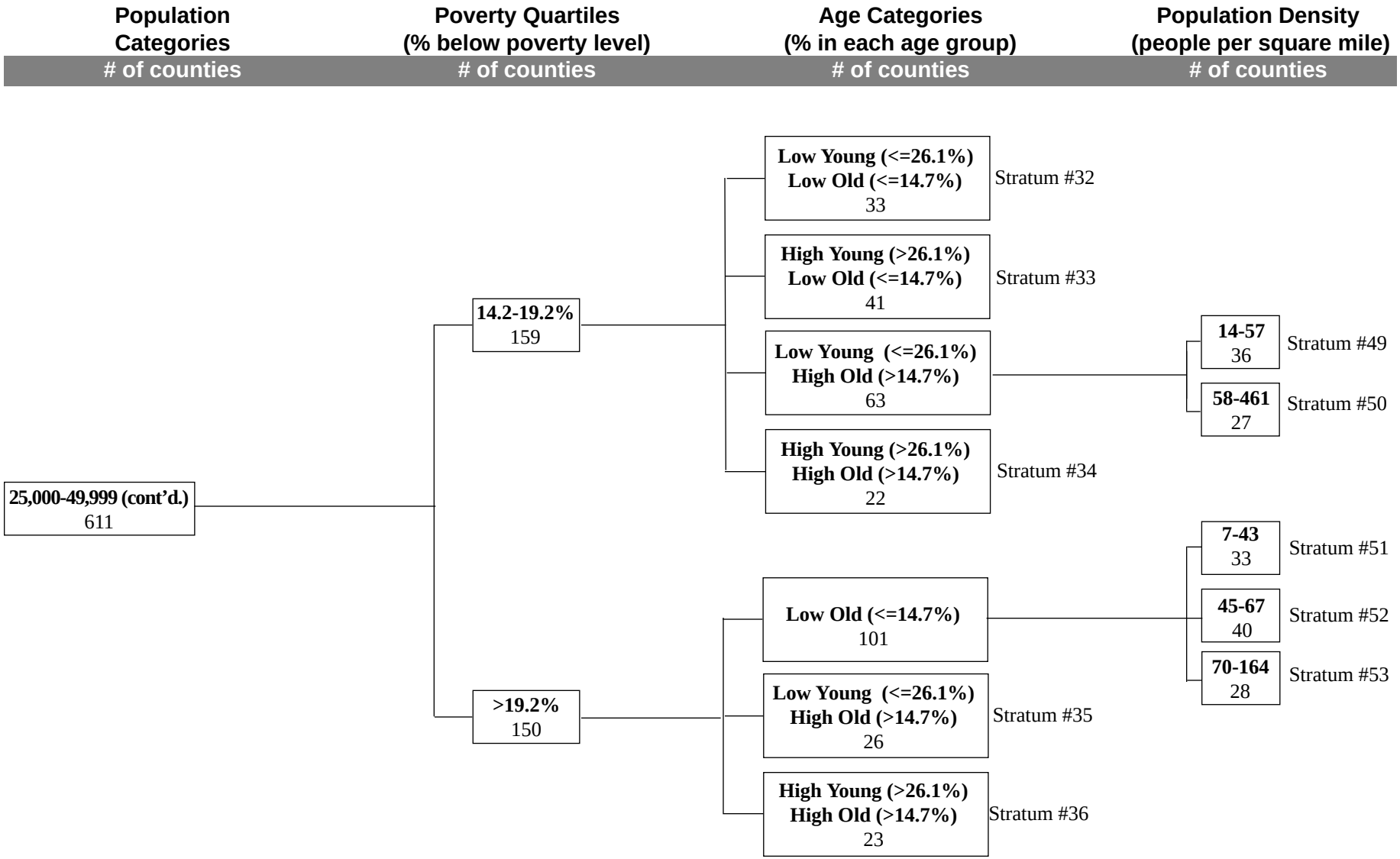

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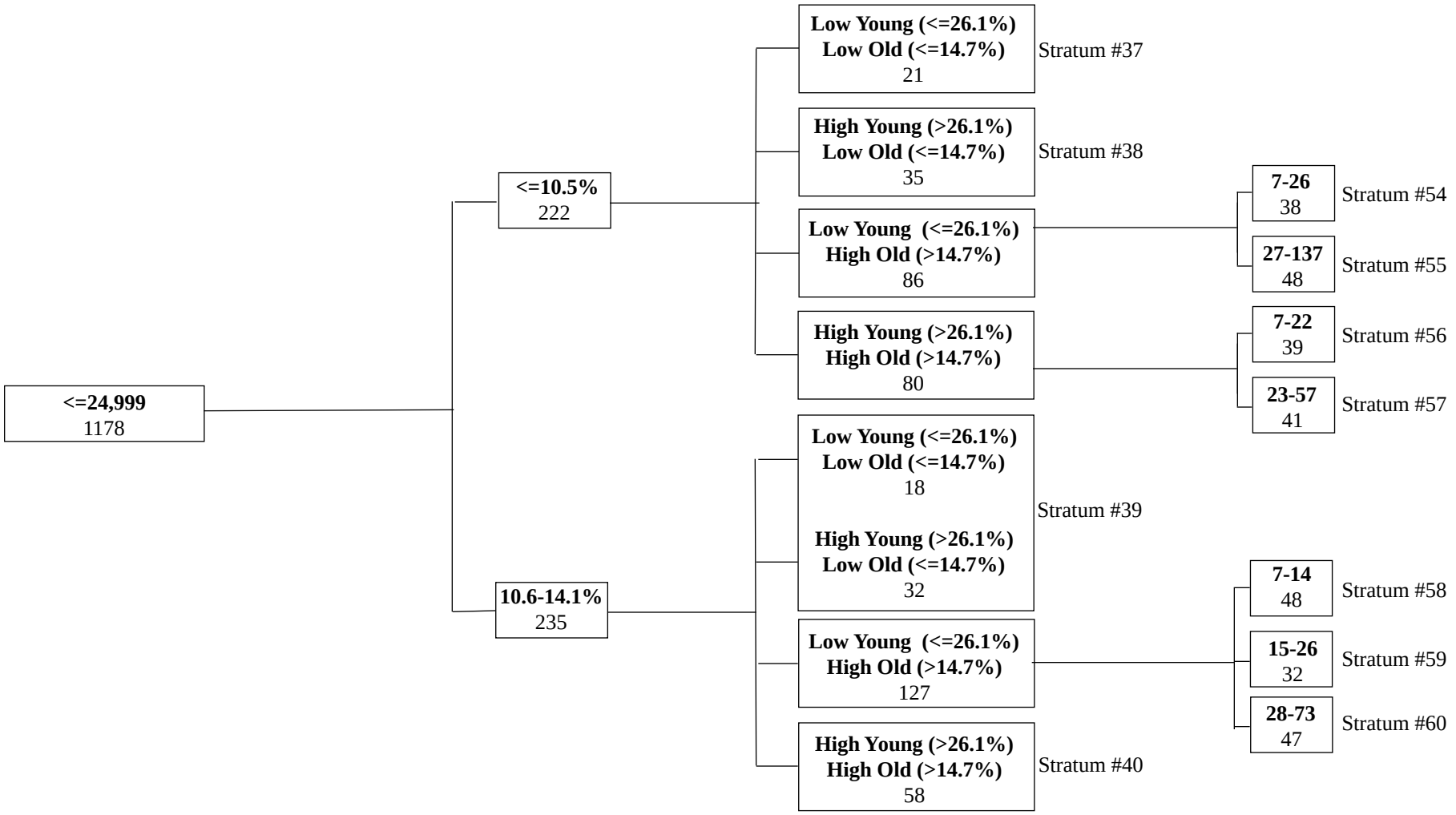

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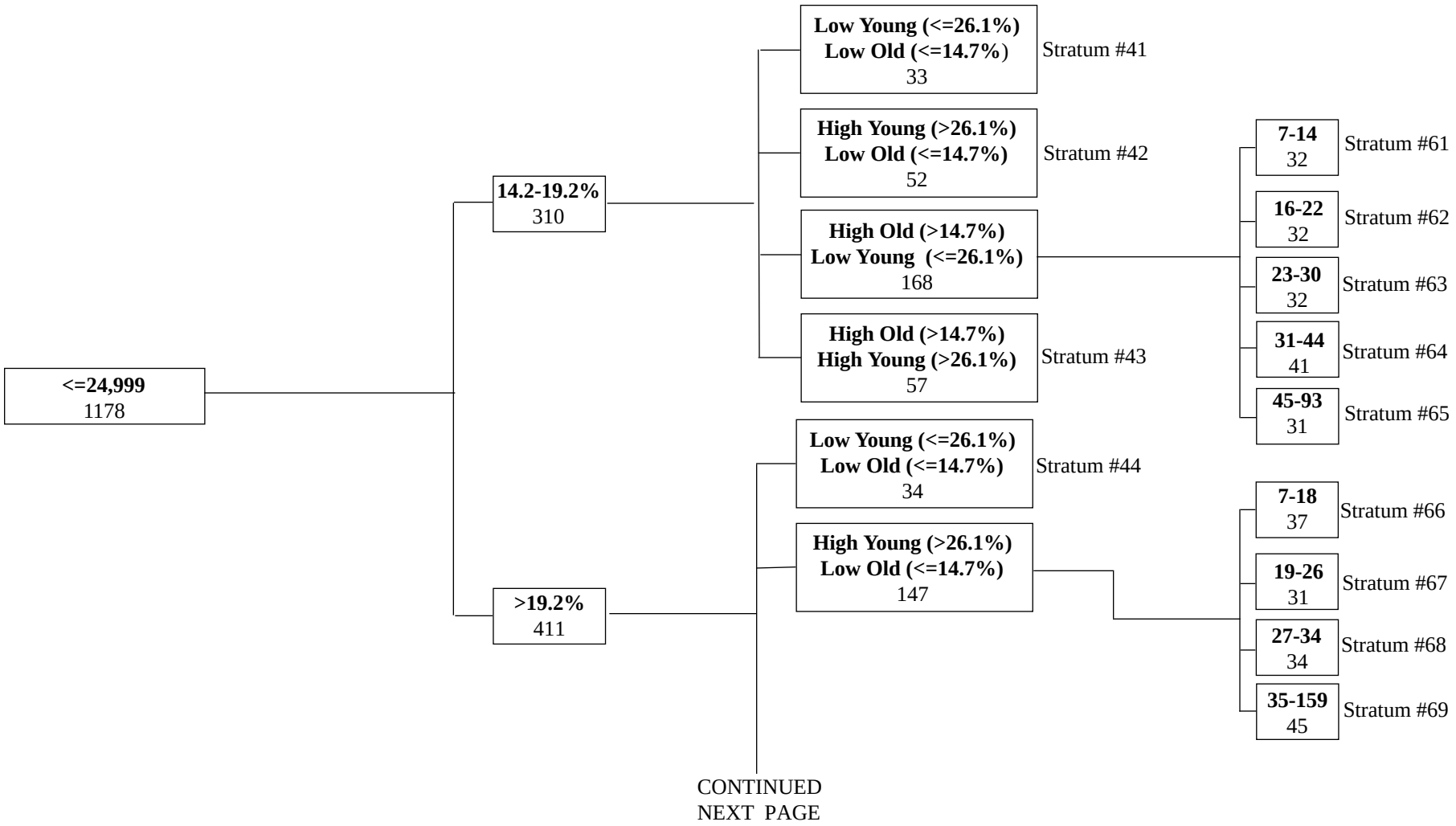

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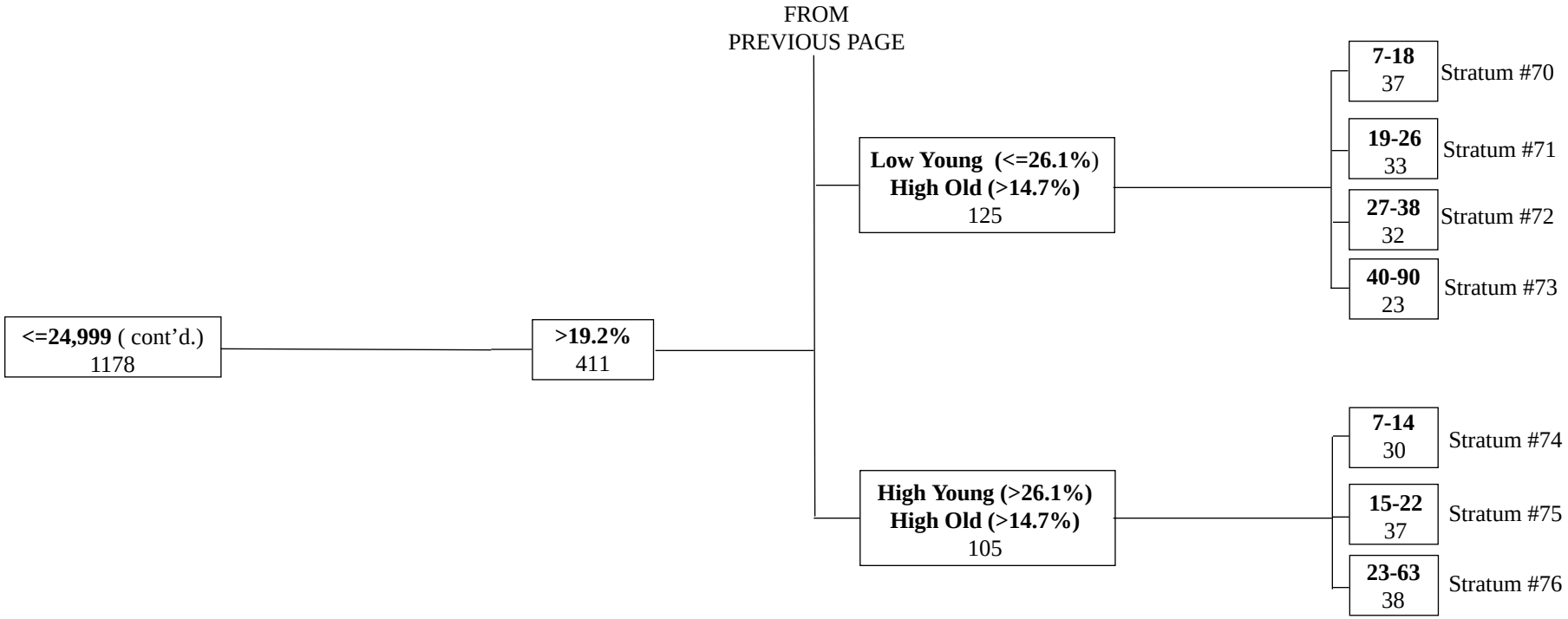
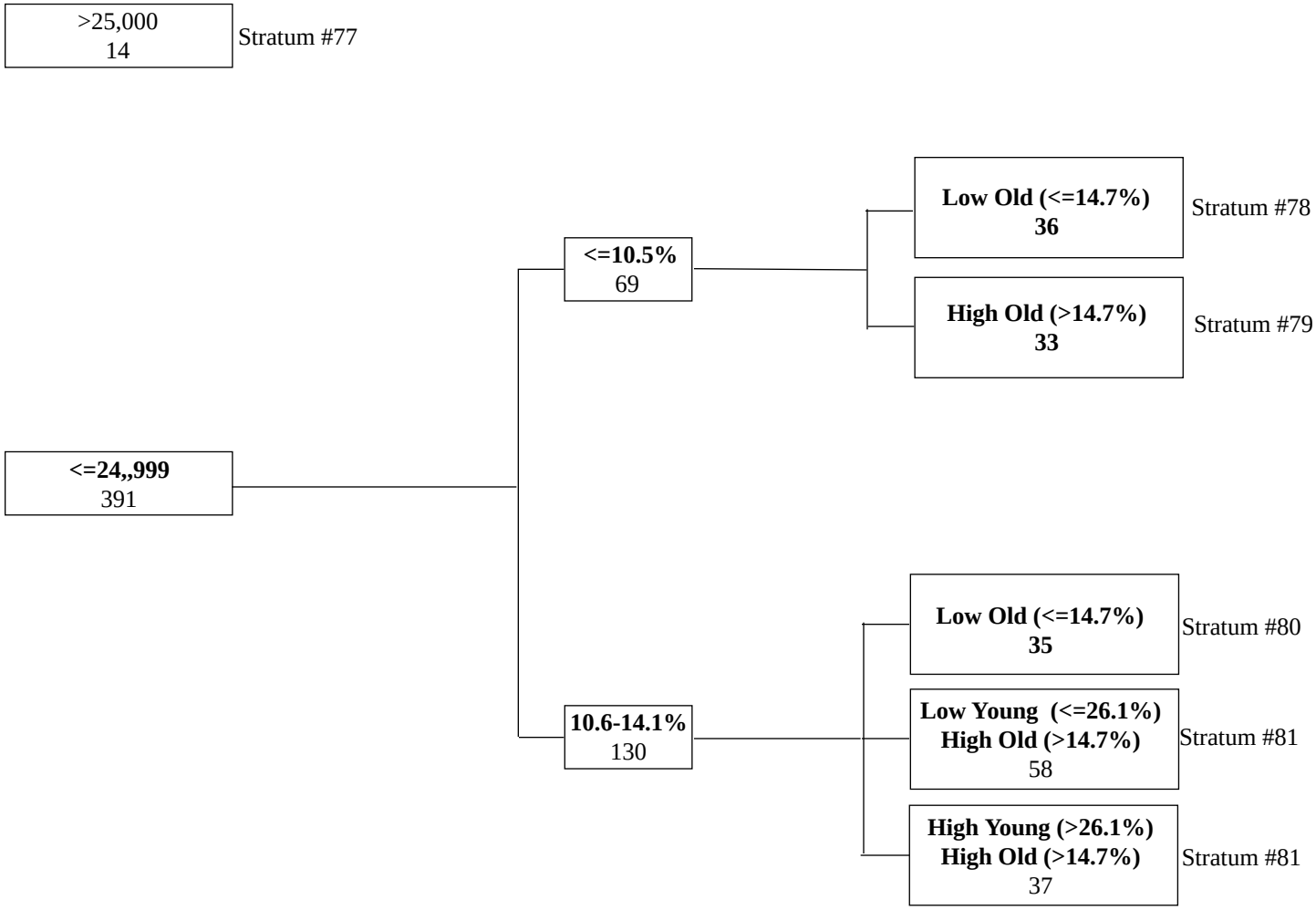


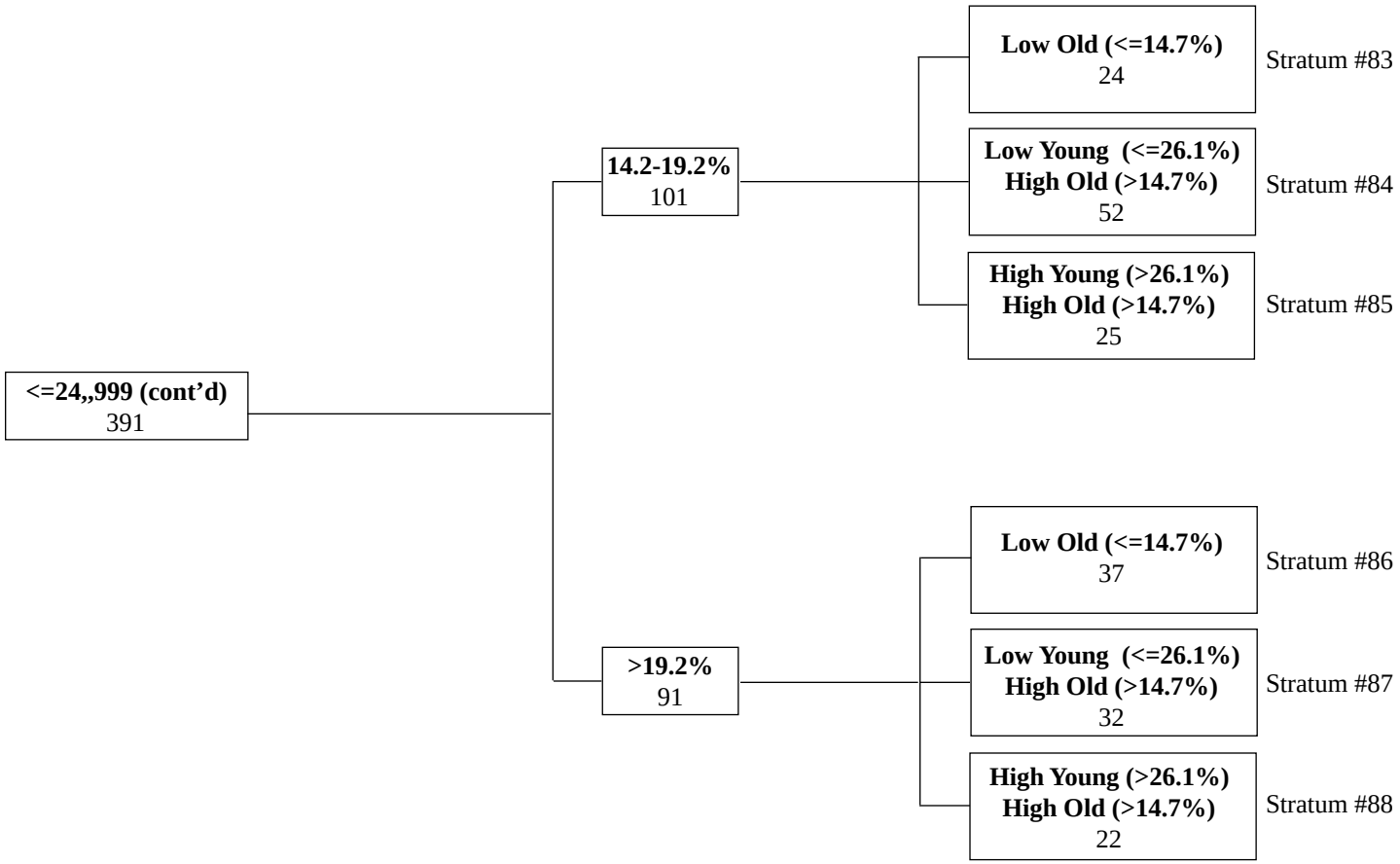
CHSI Stratification Algorithm
for Frontier Counties (<7 people per square mile) n=405

Population Categories	Poverty Quartiles (% below poverty level)	Age Categories (% in each age group)	Population Density (people per square mile)
# of counties	# of counties	# of counties	# of counties



CHSI Stratification Algorithm
for Frontier Counties (<7 people per square mile) n=405

Population Categories	Poverty Quartiles (% below poverty level)	Age Categories (% in each age group)	Population Density (people per square mile)
# of counties	# of counties	# of counties	# of counties



CHSI Stata Listing:
Number of Counties and Range of Population Size, Population Density and Poverty

Strata ID Number	Number of Counties	Population Size		Population Density		Poverty (%)	
		min.	max.	min.	max.	min.	max.
1	34	1,003,595	9,145,219	81	54,865	5.1	31.4
2	31	500,816	944,503	270	3,638	3.3	10.5
3	39	504,591	944,472	77	15,581	10.9	42.2
4	24	258,127	484,354	142	3,105	10.6	14.1
5	26	257,489	498,985	68	5,514	14.2	39.8
6	51	101,541	242,979	10	2,586	14.2	19.2
7	34	103,190	247,492	18	846	19.3	36.4
8	55	50,068	95,800	10	752	19.4	52
9	23	251,438	496,656	48	1,464	3.3	10.3
10	38	257,289	498,148	226	6,820	2.9	10.5
11	45	102,279	245,793	65	7,760	2.9	10.4
12	58	100,173	246,070	79	908	1.9	10.5
13	16	103,695	205,128	97	951	5	10.3
14	40	100,377	244,980	34	2,665	10.6	14.1
15	24	100,627	225,406	39	1,428	10.7	14.1
16	28	104,940	237,139	18	710	10.6	14.1
17	31	52,166	97,742	29	794	2.2	10.4
18	17	50,041	98,125	63	385	5.7	10.5
19	37	50,204	98,767	15	575	10.7	14
20	32	51,539	92,750	12	280	10.6	14.1
21	42	50,224	99,215	24	228	10.6	14.1
22	28	50,751	98,501	11	230	14.2	18.5
23	37	51,219	88,037	8	288	14.2	18.8
24	33	53,082	99,057	18	264	14.2	19
25	20	27,875	48,262	49	140	6	10.4
26	39	26,158	48,970	21	1,959	6.5	10.5
27	23	25,019	49,493	23	100	6	10.4
28	39	26,133	49,967	14	306	10.6	14.1
29	37	27,143	49,270	22	241	10.6	13.9
30	58	25,199	49,638	10	415	10.6	14.1
31	22	25,452	49,214	13	101	10.6	14.1
32	33	26,733	49,865	7	312	14.5	18.9
33	41	25,071	49,545	8	192	14.2	19.2
34	22	25,149	46,837	7	73	14.3	19.2

CHSI Stata Listing:
Number of Counties and Range of Population Size, Population Density and Poverty

Strata ID Number	Number of Counties	Population Size		Population Density		Poverty (%)	
		min.	max.	min.	max.	min.	max.
35	26	25,018	48,426	14	79	19.4	29
36	23	25,091	48,377	10	64	19.3	36.8
37	21	2,999	22,344	7	168	2.1	10.1
38	35	4,008	24,002	7	124	4.2	10.3
39	50	5,405	24,880	7	120	10.6	14.1
40	58	2,899	23,991	7	57	10.6	14.1
41	33	4,994	24,416	8	92	14.6	19
42	52	2,255	24,599	8	107	14.3	19.1
43	57	3,573	24,137	7	82	14.3	19.2
44	34	6,289	24,646	12	104	19.6	39.1
45	38	50,199	99,976	42	157	4.8	10.4
46	27	51,909	98,293	158	562	3.5	10.1
47	33	25,362	44,164	7	80	4.1	10.4
48	31	29,969	49,856	83	278	3.3	10.4
49	36	25,129	47,452	14	57	14.2	19.2
50	27	25,239	49,909	58	461	14.3	18.9
51	33	25,068	47,877	7	43	19.4	46.4
52	40	25,971	47,133	45	67	19.5	41.6
53	28	25,614	49,865	70	164	19.4	35.4
54	38	3,895	17,636	7	26	6.3	10.5
55	48	7,028	24,965	27	137	5.5	10.5
56	39	4,991	19,268	7	22	6.8	10.5
57	41	5,854	24,885	23	57	6	10.4
58	48	3,172	21,117	7	14	10.6	14
59	32	4,960	24,443	15	26	10.6	14.1
60	47	8,167	23,998	28	73	10.6	14
61	32	3,973	21,283	7	14	14.2	18.9
62	32	2,490	21,116	16	22	14.3	19
63	32	5,381	23,719	23	30	14.4	19.1
64	41	7,801	24,828	31	44	14.2	19.1
65	31	6,805	24,879	45	93	14.2	18.5
66	37	3,733	19,448	7	18	20	48.3
67	31	7,082	24,186	19	26	19.4	48.6
68	34	5,620	24,421	27	34	20.5	44.9

CHSI Stata Listing:
Number of Counties and Range of Population Size, Population Density and Poverty

Strata ID Number	Number of Counties	Population Size		Population Density		Poverty (%)	
		min.	max.	min.	max.	min.	max.
69	45	6,818	24,161	35	159	19.3	41.4
70	37	2,333	21,884	7	18	19.3	31.2
71	33	2,173	22,119	19	26	19.3	35.6
72	32	4,605	22,652	27	38	19.3	46.6
73	23	9,311	24,746	40	90	19.3	33.9
74	30	1,857	23,922	7	14	19.4	39
75	37	3,461	22,442	15	22	19.8	41.3
76	38	5,959	24,602	23	63	19.3	37.2
77	14	25,513	609,311	1	6	6.9	39.4
78	36	39	22,752	0	6	0	10.3
79	33	676	10,716	1	5	4.7	10.5
80	35	846	15,845	0	6	10.7	14
81	58	428	18,300	1	6	10.7	14.1
82	37	638	16,958	0	6	10.7	14
83	24	427	18,772	0	6	14.4	19
84	52	717	18,315	0	6	14.2	19.2
85	25	839	13,718	0	6	14.2	19
86	37	1,637	17,538	1	6	19.3	46.7
87	32	1,051	16,000	0	6	19.3	31
88	22	556	14,917	1	6	19.3	41.1